



# Introduction to the Forest Resilience Bond (FRB)

Prepared for California State Board of Forestry and Fire Prevention

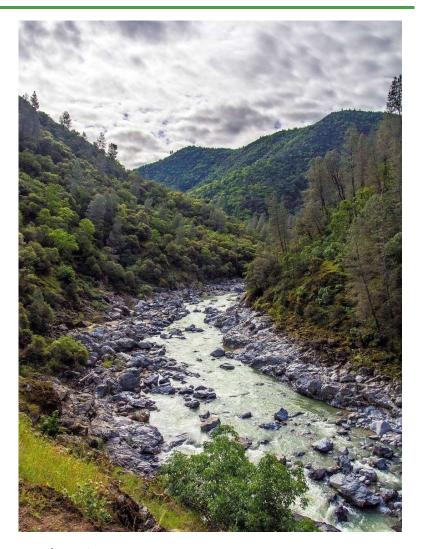
# Agenda

Refresher: What is the Forest Resilience Bond and what are our goals?

Why Private Capital?

Introducing: The Yuba Project

Next Steps and Lessons Learned



Yuba River



## Goals of the Forest Resilience Bond

Provide resources to support collaboration

Accelerate pace and scale of restoration

Support public land management



- Rural job creation & community development
- Community resilience
- Protected lives & homes

### **ENVIRONMENTAL**

- Reduced fire severity
- Protected water resources
- Carbon storage
- Protected habitat

### **FINANCIAL**

- Value for beneficiaries
- Taxpayer and ratepayer savings
- Investor returns



# The Forest Resilience Bond Ecosystem



### **Project Partners**









#### **Research Partners**





**Stanford**Water in the West

### **Grant & In-Kind Funders**







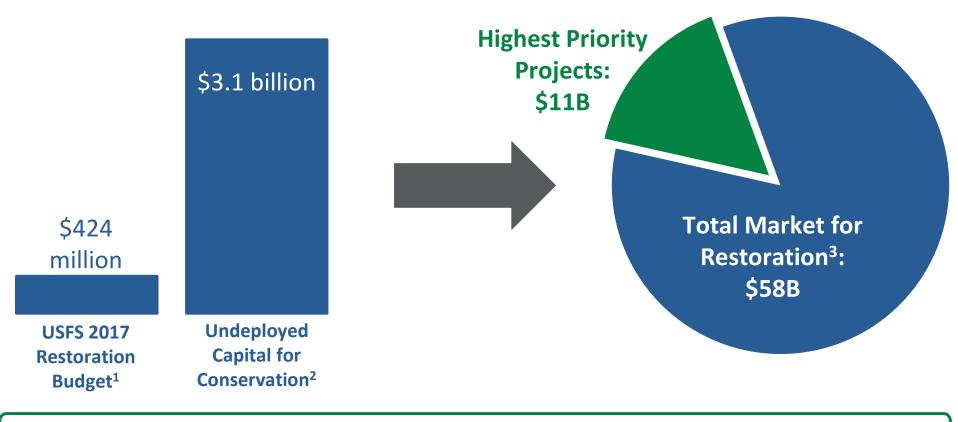


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# Opportunity for Private Capital



### **Advantages of Private Capital**

Infusion of capital

**Cost sharing** 

**Larger projects** 

Project catalyst

Ex-post payments

- 1. <u>USFS Fiscal Year 2017 Budget Overview</u> (\$40 million for CFLRP and \$384.1 million for hazardous fuel reduction)
- 2. <u>State of Private Investment in Conservation 2016</u> (\$3.1 billion of investor capital undeployed at end of 2015)
- 3. <u>USFS Fiscal Year 2017 Budget Overview</u> (58 million acres at "high or very high risk of severe fire" @ \$1,000/acre)



# Connecting Investor Capital to Conservation

### **Forest Resilience Bond**

**Ecosystem Services** 

**Evaluation** of Benefits

**Innovative Contracts** 

Financial Vehicle

Investor Capital





Fire, water, and hydro benefits valuable to stakeholders



Quantifies
benefits
accruing to
multiple
stakeholders



Monetizes multi-faceted benefits as payments

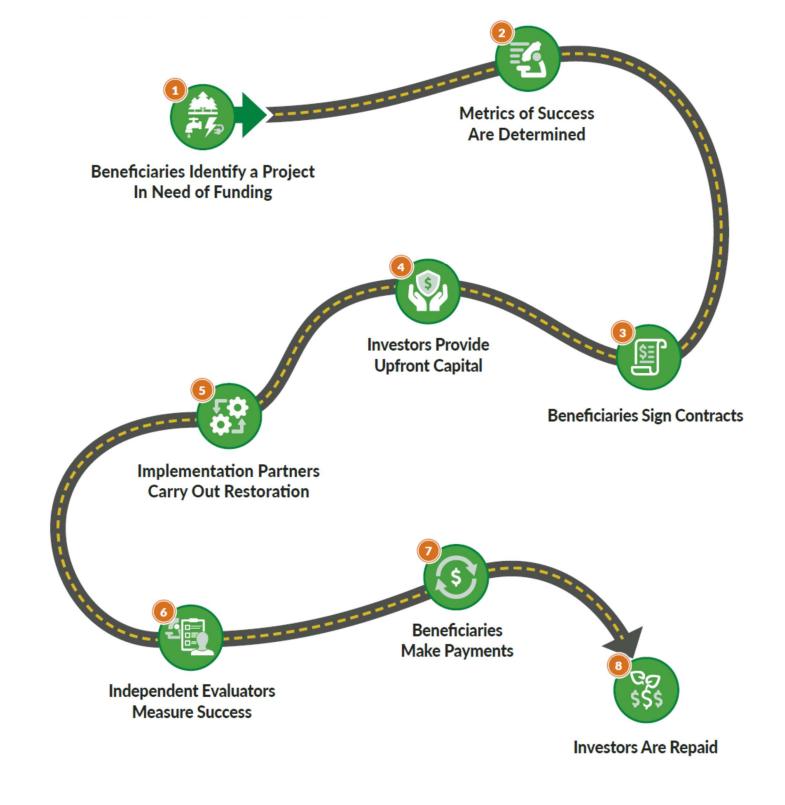


Converts contractual payments into investor returns



Immense, untapped resource to finance conservation





# The Yuba Project, Tahoe NF

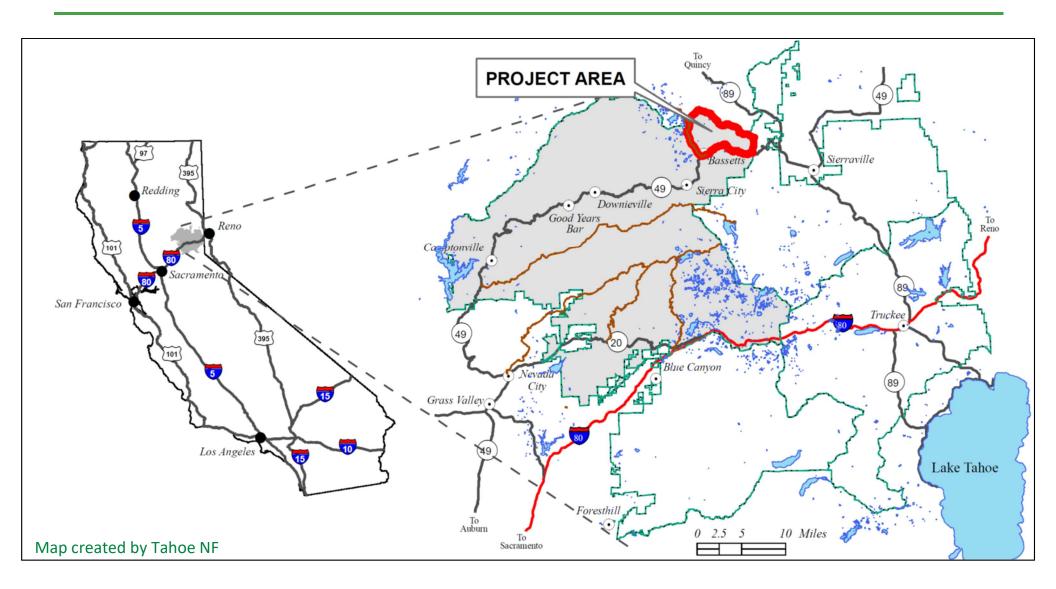


# Yuba Project Overview

Location	Northern CA - North Yuba River Watershed, Tahoe National Forest
Project type	Primarily fuels reduction with some meadow restoration, invasive species management, and aspen regeneration
Size	7,114 acres of restoration to protect 15,000 acre area
Land ownership	Public – USFS
Status	Closed on 11/1/2018. Restoration work planned for 2018 – 2022
Total project cost	\$4.6 million (\$4.0 million financed by FRB)
Expected impacts	Wildfire risk reduction, increased water quantity, protected water quality, avoided sedimentation, protected habitat and ecosystems
Payors	CA State (CAL FIRE and SNC grants) and Yuba Water Agency. USFS providing in-kind support

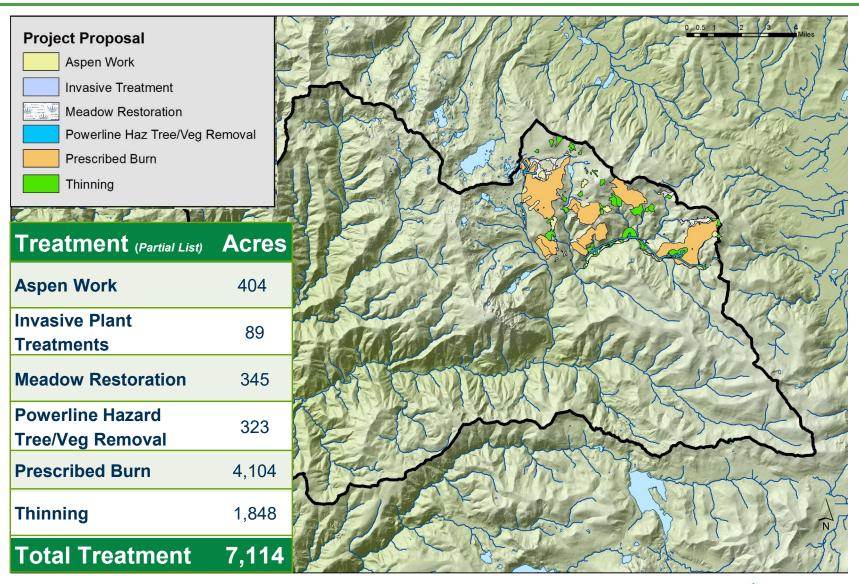


# Yuba Project – A Pilot For The North Yuba



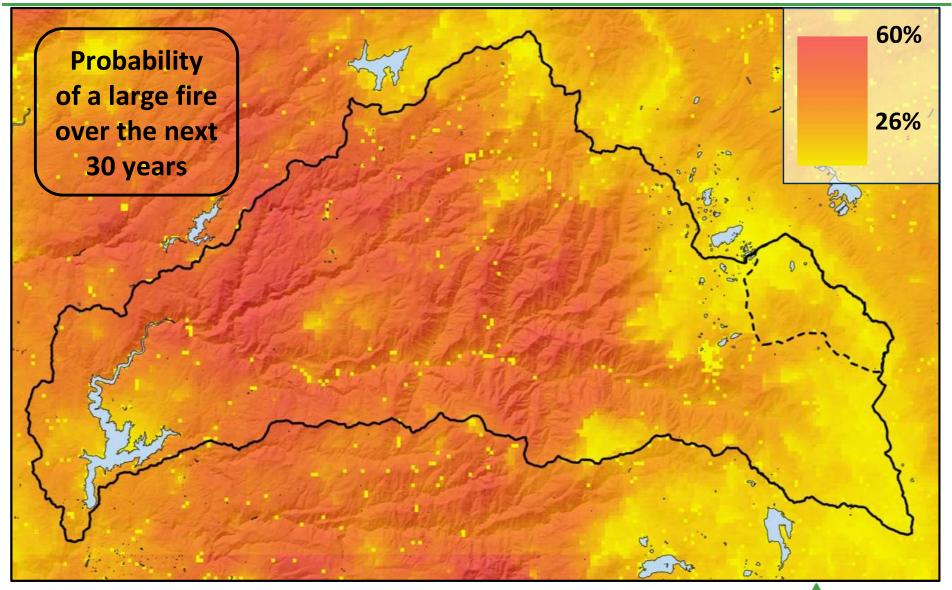


# Yuba Pilot Restoration Project

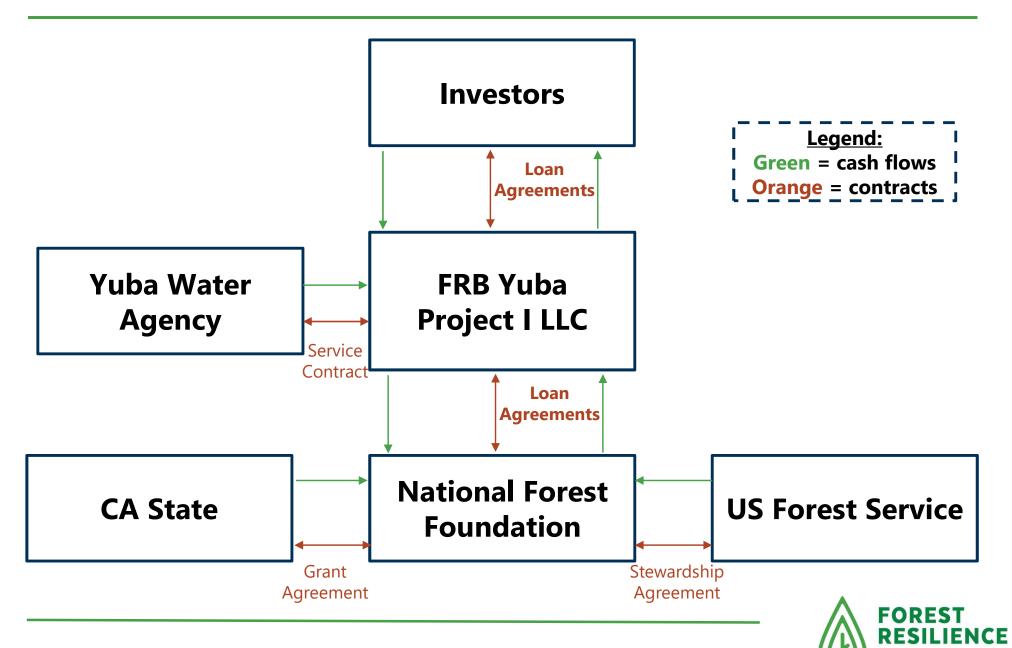




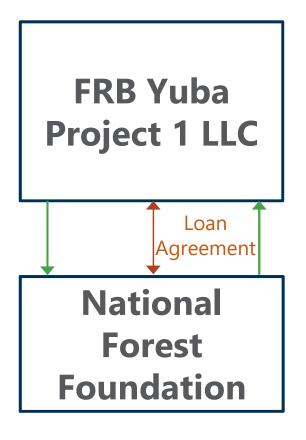
# North Yuba Wildfire Risk



## Flow of Funds



# Role of the Implementation Partner





1

### **Implementation Partner**

Third-party implementation partner ensures proper governance by creating firewall between investors and restoration activities

2

### **Financial Intermediary**

Use of financial intermediary facilitates payments from USFS and state to the FRB



# **Project Investors**







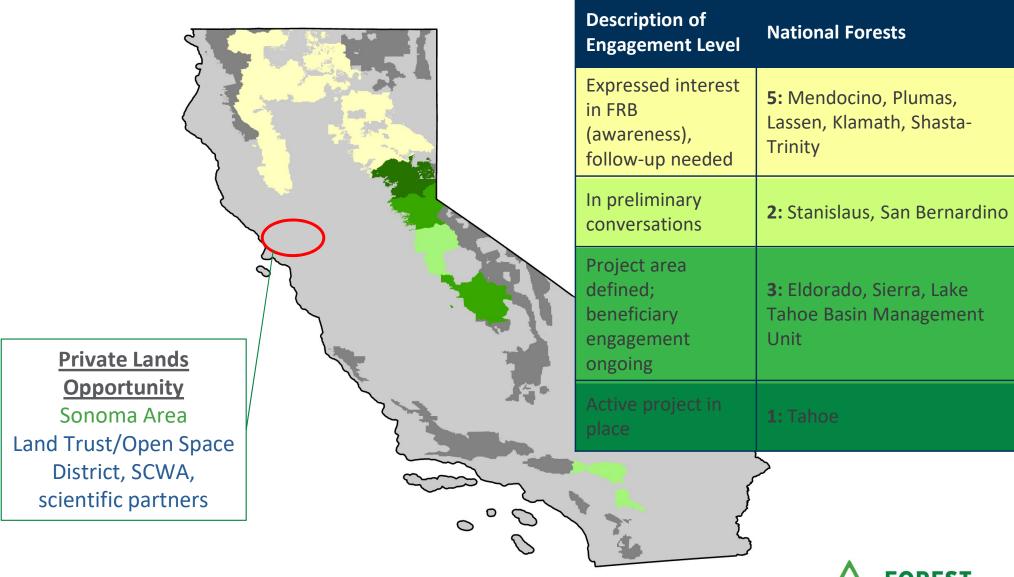




# Next Steps & Lessons Learned



### Where are we headed in CA?



# Lessons Learned + Next Steps

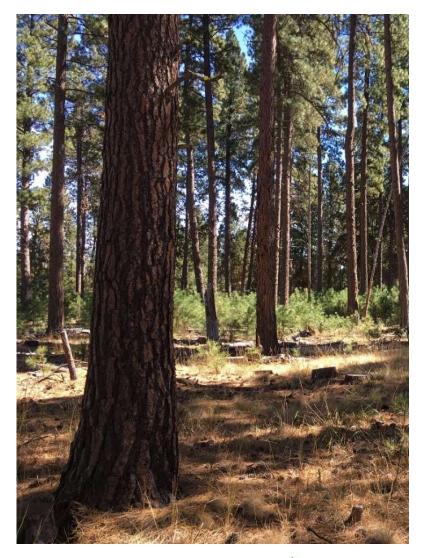
Working Capital Issues with CAL FIRE grants – SB901 advances help, but more help is needed.

This model can maximize Matching
Funds for projects, provide TA to new
utility partners → head towards fewer,
larger projects

Need: Develop more high capacity Implementation Partners

Next Frontier: **Private Lands** + BLM

**Forest Land** 







### **Zach Knight**

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